

TACHINIDÆ AND SOME CANADIAN HOSTS.

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In working over the Tachinidæ in the collection of the Division of Entomology, at Ottawa, a number of breeding records were encountered. Thirty-nine of these are new, in so far as the writer is aware, and these form the basis of the present list. In addition to these thirty-nine, there are seven that have been published since the appearance of Coquillett's "Revision of the Tachinidæ of America, north of Mexico," and Aldrich's "Catalogue of North America Diptera." These seven are included in the present list; they are indicated by an asterisk (*), and reference is made in each case to the published record.

The majority of these records were obtained by Dr. James Fletcher and Mr. Arthur Gibson. To the latter colleague, whose kindly assistance has made possible the compilation of the present list, the writer is under numerous obligations. The letters J. F. or A. G. placed in brackets after the species indicate the person who was responsible for the rearing. A few records were obtained by others than the above; in these cases the names or initials of the persons responsible for the rearing are given.

No doubtful records are included in the list. The arrangement follows that of Mr. D. W. Coquillett in the excellent list of tachinid flies and their hosts contained in his "Revision" (loc. cit., p. 9).

PARASITES.

HOST INSECTS. °

- Blepharipeza adusta* Loew. *Halisidota caryæ* Harris.—Bred from cocoons of host collected at Ottawa; 11 specimens, issued June 16—July 4. (A. G.)
- Halisidota maculata* Harris.—Bred from cocoons of host collected at Ottawa; 1 specimen. (A. G.)
- Malacosoma disstria* Hubn.—Bred at Fredericton, N. B., from larvæ and pupæ collected locally and at Ottawa; numer-

- ous specimens, issued spring.
(J. D. T.)
- Blepharipeza leucophrys* Wied. *Sphinx chersis* Hbn.—Bred from specimen of pupa collected at Ottawa; 1 specimen, issued May 30. (A. G.)
- Euphorocera claripennis* Macq. *Heliophila unipuncta* Haw.—Bred from larva collected at Ottawa; 1 specimen. (J. F.)
- Malacosoma* sp.—Bred at Ottawa from larva; place of collection not known. (J. F.)
- Exorista affinis* Fall. *Phragmatobia fuliginosa* Linn.—Bred from cocoons collected at Ottawa; 2 specimens, issued April 13 and 27. (A. G.)
- Exorista chelonix* Rond. *Apantesis ornata* Pack., var. *achaia* G. & R.—Bred at Ottawa from larvæ collected at Kaslo, B. C.; 3 specimens, issued June 6. (A. G.)
- Malacosoma disstria* Hbn.—Bred at Fredericton, N. B., from larvæ collected locally and at Ottawa; numerous specimens, issued spring. (J. D. T.)
- **Phragmatobia assimilans* Walk., var. *franconia* Slosson.—Bred at Ottawa from larvæ collected at Hymers, Ont.; 1 specimen, issued May 7; c.f. A. Gibson, Ent. Record, 1910, p. 18, and A. Gibson, CAN. ENT., Vol. XLIII., p. 127.
- Exorista eudryæ* Town. *Euthisanotia grata* Fab.—Bred from larva collected at Ottawa; 1 specimen, issued Aug. 27. (J. F.)

- Exorista futilis* O. S. *Isia isabella* S. & A.—Bred from larva collected at Ottawa; 1 specimen, issued May 21. (J. F.)
- Hyppa xylinoides* Gn.—Bred from larva collected at Ottawa; 1 specimen, issued May 23. (C. H. Young.)
- Exorista helvina* Coq. *Lycia cognataria* Gn.—Bred at Ottawa from larvæ collected at Coldstream, B. C.; 4 specimens, issued May 29 and June 12. (A. G.)
- Exorista nigripalpis* Town. *Tortrix fumiferana* Clem.—Bred by G. E. Sanders at Ottawa from larvæ collected at Chicoutimi, St. Sylvestre and Maniwaki, P. Q., and Duncan, B. C.; 68 specimens, issued June 18–July 10.
- Exorista pyste* Walk. *Tortrix fumiferana* Clem.—Bred at Ottawa by G. E. Sanders from larvæ collected at Chicoutimi, P. Q.; 2 specimens, issued July 3.
- Exorista vulgaris* Fall. *Tortrix fumiferana* Clem.—Bred at Ottawa by G. E. Sanders from larvæ collected at Chicoutimi, St. Sylvestre, St. Gabriel de Brandon and Montcalm, P. Q.; 16 specimens, issued June 18–July 10.
- Frontina frenchii* Will. *Papilio daunus* Bdv.—Bred at Ottawa from pupæ collected at Kelowna, B. C.; 9 specimens, issued Aug. 23. (A. G.)
- Papilio eurymedon* Bdv.—Bred at Ottawa from pupæ collected

- at Nanaimo, B. C.; 10 specimens, issued April 12, 16, 17 and 19. (A. G.)
- Samia columbia* Smith.—Bred at Ottawa from pupæ collected at Cartwright, Man.; 7 specimens. (J. F.)
- Frontina tenthredinidarum* Town. *Cladius pectinicornis* Fourc.—Bred from larva collected at Ottawa; 1 specimen, issued Aug. 29. (J. F.)
- Emphytus canadensis* Kirby.—Bred from larva collected at Ottawa; 1 specimen, issued Sept. 1. (J. F.)
- **Nematus erichsonii* Hartig.—Bred from cocoons collected at St. John, N. B.; c.f. C. G. Hewitt, "The Larch Sawfly," Bull. No. 5, Div. of Ent., Ottawa.
- Gonia capitata* DeG. *Paragrotis ochrogaster* Gn.—Bred at Ottawa from pupæ collected at Cow Bay, C. B.; 1 specimen. (J. F.)
- Agrotid sp.—Bred from pupa collected at Ottawa; 1 specimen, issued spring. (J. F.)
- Linnæmyia anthracina* Thompson. **Hyphoraia parthenos* Harris.—Bred at Ottawa from larvæ collected at Hymers, Ont.; 2 specimens, issued May 16; c.f. W. R. Thompson, CAN. ENT., Vol. XLIII., No. 8, p. 266.
- Masicera eufitchiæ* Town. *Halisdota tessellaris* S. & A.—Bred from pupæ collected at Ottawa; 2 specimens, issued Aug. 8. (A. G.)

- Masicera myoidea* Desv. **Papaipema appassionata* Harvey.—Bred at Ottawa from larva collected by C. H. Young, at Meach Lake, P. Q.; 1 specimen, issued Aug. 13; c.f. James Fletcher, Ent. Rec. 1906, p. 102.
- Papaipema purpurifascia* G. & R.—Bred from larvæ collected at Ottawa; 9 specimens, issued Aug. 24-28. (A. G.)
- Masicera rutila* Meig. *Tortrix fumiferana* Clem.—Bred at Ottawa by G. E. Sanders from pupæ collected at Dun-cans, B. C.; 2 specimens, issued July 10 and 19.
- Phorichæta sequax* Will. *Heliophila commoides* Gn.—Bred from specimens of host collected at Ottawa; 7 specimens, issued June 10. (A. G.)
- Phorocera leucaniæ* Coq. **Euproctis chrysorrhæa* Linn.—Bred at Fredericton, N. B., from larva collected by P. N. Vroom at Chamcook, N. B.; 1 specimen, issued spring. A valuable parasite of the same host in Massachusetts; c.f. Fiske & Howard, Bull. 91, Bureau of Ent., U. S. Dept. of Agr., Washington, D. C. (J. D. T.)
- Phorocera saundersii* Will. *Ennomos magnarius* Gn.—Bred at Ottawa from pupa collected at Mt. Hebron, N. B.; 1 specimen, issued in office, Dec. 31. (J. F.)
- Euanessa antiopa* Linn.—Bred

- from pupa collected at Ottawa; 1 specimen. (J. F.)
- Plagia americana* V. d W. *Plusia æreoides* Grt.—Bred from larvæ collected at Ottawa; 2 specimens, issued June 10. (A. G.)
- Sturmia albifrons* Walk. *Heliophila unipuncta* Haw.—Bred from larvæ collected at Ottawa; 4 specimens, issued July 8. (J. F.)
- Sturmia inquinata* V. d W. *Sphinx chersis* Hbn.—Bred from larvæ collected at Ottawa; 20 specimens, issued May 22. (A. G.)
- Sturmia normula* V. d W. *Lemonias taylori* Edw.—Bred at Ottawa from larva collected on Vancouver Island; 1 specimen. (J. F.)
- Sturmia phyciodis* Coq. *Phyciodes tharos* Drury.—Bred from specimen of host collected at Ottawa; 1 specimen, issued June 23. (J. F.)
- Tachina mella* Walk. *Datana ministra* Drury.—Bred at Ottawa from larvæ collected at Armstrong, B. C.; 2 specimens, issued in office, Oct. 29. (A. G.)
- Notolophus antiqua* Linn.—Bred at Ottawa from larvæ collected at Rudolph, N. S.; 5 specimens, issued Sept. 3. (A. G.)
- Tachina simulans* Meig. *Harpiphorus tarsatus* Say.—Bred from specimen of host collected at Ottawa; 1 specimen, issued June 30. (J. F.)
- Winthemia fumiferanæ* Tothill. **Tortrix fumiferana* Clem. — Bred at Ottawa by G. E.

Sanders, from Maniwaki, Que., and Duncans, B. C.; 26 specimens; c.f. J. D. Tothill, CAN. ENT., Vol. XLIV., No. 1, p. 2.

Winthemia quadripustulata Fab. . . *Cucullia convexipennis* G. & R.

—Bred from larva collected at Ottawa; 1 specimen. (J. F.)

**Marumba modesta* Harris.—Bred from larva; c.f. James Fletcher, Ent. Record, 1903, p. 99.

Pholus achemon Drury.—Bred from pupa collected at Ottawa; 1 specimen. (A. G.)

The specimens reared from the above three hosts issued May 11, 16 and Sept. 21.

GEOMETRID NOTES—NEW VARIETIES

BY L. W. SVETT, BOSTON, MASS.

Cleora pampinaria var. *nubiferaria*, n. var.

Expanse 29 mm.; palpi very short. Fore wings smoky black with line running from inner margin up to vein a 1, then along the vein for about 3 mm., where it stops. In the centre of the fore wings on the median vein there is a dark line, especially broad at the vein, where it curves upward at right angles to the costa. On the outer fourth there is another band parallel to this, which runs from the median vein to costa just beyond the faint black discal spot. These lines are practically the same as in normal *pampinaria* but the black colourings of the wings render them indistinct. There is a very distinct white zig-zag line running parallel to the outer margin from costa to inner margin with a long white projection near M_2 . The fringe is quite long and black with points at base. The hind wings are of the same smoky colour as the fore wings, with a faint extra-discal black line, which shows as black points on the veins. The discal spot appears as a ring and touches the extra-discal line. There is a trace of an irregular white line near outer margin. The outer edge of the wing is slightly